



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE

4949-A Cox Road, Glen Allen, Virginia 23060

(804) 527-5020 Fax (804) 527-5106

www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

May 18, 2009

Mr. David N. Smith
Director of Environmental, Health and Safety Services
Old Dominion Electric Cooperative
Innsbrook Corporate Center
4201 Dominion Boulevard
Glen Allen, Virginia 23060

Location: Surry County
Registration No.: 52272

Dear Mr. Smith:

This letter provides interim comments on the proposed Old Dominion Electric Cooperative (ODEC) - Cypress Creek Power Station PSD permit application dated December 17, 2008, and case-by-case MACT analysis dated February 10, 2009. The staff of the Piedmont Regional Office has completed further review of your permit request. A preliminary evaluation has been performed on the PSD application BACT and case-by-case MACT sections, and the following deficiencies have been identified:

LGBF

The local governing body form (LGBF) has not been received from the incorporated town of Dendron, Virginia indicating the site is acceptable based on local zoning and ordinance requirements. DEQ must have a copy of the transmittal letter and signed LGBF to be submitted before we can continue processing ODEC's PSD application.

COAL QUALITY

The application must contain a full description of coal quality (to include average and maximum % sulfur content, ash, trace metals (AP-42), fluorides, chlorides and Btu content); this information will be used to verify your estimated emissions. In addition to the design coal specifications, ODEC must include a list of other available coal types (Appalachian, Powder River Basin, etc.), the costs associated with these alternative coals, and similar (to that requested for the design coal) coal quality data for the alternative coals and BACT analysis for coal cleaning and processing.

PM 2.5

Particulate matter with aerodynamic diameter less than or equal to 2.5 microns (PM 2.5) must be evaluated in terms of a 10 ton per year threshold as a "significant" pollutant under the definition of the same in the PSD regulation. PM 2.5 is a regulated pollutant in Virginia's PSD permit program and although Virginia has adopted EPA's Policy of using PM 10 as a surrogate for PM 2.5, this policy will no longer be in effect by the projected start-up date for the Cypress Creek Power Station facility. Requiring a PM 2.5 analysis for this facility is consistent with the requirements applied to the Virginia City Hybrid Energy Center (VCHEC) permit. Therefore the application must contain a top down BACT analysis for PM 2.5.

BACT/MACT

The application must contain estimated uncontrolled emissions levels for all criteria and HAP pollutants for the plant without add-on controls. The application must contain estimated removal efficiencies for each control system evaluated and each pollutant. Recent permits issued to coal-fired power plants including, but not limited to the Virginia City Hybrid Energy Center, the Santee Cooper permit in South Carolina and the Desert Rock, New Mexico permit reflect the level of control that should be evaluated for your proposed super critical pulverized coal boilers. DEQ will be using short term averaging times for criteria pollutants and the application must contain emissions estimates that support each of these limits. DEQ expects an aggressive level of control will result in significant reductions in annual and hourly emissions. DEQ anticipates ODEC's BACT and case-by-case MACT analysis to be at an equivalent or better level of control unless you can demonstrate otherwise. DEQ fully understands that this may result in BACT costs per ton that are above levels that are reflected in ODEC's current analysis. In addition, we are specifically requesting that ODEC evaluate Electro-Catalytic Oxidation (ECO) integrated control technology and any other comprehensive integrated control technology that is available.

Integrated Gasification Combined Cycle (IGCC)

Although Virginia does not currently consider IGCC to be a control technology for the purposes of a PSD BACT analysis, the potential applicability of this technology to the Cypress Creek Power Station project is likely to be a very high profile topic. DEQ therefore requests that ODEC provide a thorough evaluation of the potential applicability of IGCC to the Cypress Creek Power Station project. This evaluation should include a discussion of the advantages and disadvantages of IGCC relative to the selected combustion technology for issues such as cost, reliability, air pollution emissions and any other considerations that factored in ODEC's rejection of IGCC.

Green House Gases (GHGs)

At this time, Virginia does not consider Carbon Dioxide (CO₂) to be a PSD regulated pollutant. As you may know however, the new EPA Administration is reconsidering the application of the Clean Air Act to GHGs. For now, DEQ requests that ODEC provide an estimate of their potential GHG emissions.

If you have any additional questions, please call "Sparky" H.L. Lisle, Jr. at 804-527-5148.

Sincerely,


James E. Kyle, P.E.
Air Permit Manager

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cc: NPS, Shenandoah National Park
USFS, James River Face Wilderness Area
USFS, Swanquarter Wilderness Area
USFS, Dolly Sods Wilderness Area
USFS, Otter Creek Wilderness Area
US EPA, Regional Administrator, Region III